**How to Use the Excel Workbook for Calculation of Condensation Heat Transfer Coefficient for Water**

**Sheet 1** is the data sheet. It contains constants necessary for calculation of Condensation Heat Transfer Coefficient for water. It has table for values of Density, Viscosity and Conduction Coefficient against all values of Temperature between 10 and 1000 C for water at 1 atmosphere pressure. All the values have been obtained by simple linear interpolation and are in SI unit.

**Sheet 2** is main calculation sheet. Here using VBA programming specific buttons have been designated for calculation of heat transfer coefficients for various different cases.

In **Case 1: For Vertical Plates/Cylinders**

User is required to input wall temperature and value of x and complete length. After inputting the values, the user must press the calculate button and then the compiler will automatically take all the values of constants for the required film temperature from sheet 1 and give the result in the specified cells.

In **Case 2: For Horizontal Tubes**

User is required to input wall temperature and diameter of tube. After inputting the values, the user must press the calculate button and then the compiler will automatically take all the values of constants for the required film temperature from sheet 1 and give the result in the specified cells

In **Case 3: For Tube Banks**

User is required to input wall temperature and number of tubes and diameter of tube. After inputting the values, the user must press the calculate button and then the compiler will automatically take all the values of constants for the required film temperature from sheet 1 and give the result in the specified cells

In **Case 4: For Isothermal Sphere**

User is required to input wall temperature and diameter of sphere. After inputting the values, the user must press the calculate button and then the compiler will automatically take all the values of constants for the required film temperature from sheet 1 and give the result in the specified cells

In Case 5: **For Condensation Inside Horizontal Tubes**

User is required to input wall temperature and diameter of tube. After inputting the values, the user must press the calculate button and then the compiler will automatically take all the values of constants for the required film temperature from sheet 1 and give the result in the specified cells

In **Sheet 3** you can change the values of variables in the tables and copy the values of Condensation Heat transfer Coefficients from Sheet 2 and observe the trends on graphs.